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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LU, FRANK WEI MIN	
ART UNIT	**PAPER NUMBER**
1634	

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/016,416	BAMDAD ET AL.	
	Examiner	Art Unit	
	Frank W Lu	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 June 2006* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *18 and 20-27* is/are pending in the application.

4a) Of the above claim(s) *26* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *18,20-25 and 27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *6/06* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

CONTINUED EXAMINATION UNDER 37 CFR 1.114 AFTER FINAL REJECTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission of RCE and the amendment filed on June 1, 2006 have been entered. The claims pending in this application are claims 18 and 20-27 wherein claim 26 has been withdrawn due to species election. Rejection and/or objection not reiterated from the previous office action are hereby withdrawn in view of amendment filed on June 1, 2006. Therefore, claims 18, 20-25, and 27 will be examined.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 18, 20, 24, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sigal *et al.,* (US Patent No.6,319,670 B1, filed on December 23, 1997) in view of Meade *et al.,* (US Patent No. 5,770,369, filed on June 7, 1996) and Roberts *et al.,* (US Patent No. 5,958,791, filed on September 27, 1996).

Sigal *et al.,* teach that method and apparatus for improved luminescence assays using microparticles.

Regarding claims 18, 24, and 27, Sigal *et al.,* teach a composition comprising (i) a sample, (ii) microparticles (ie., colloidal gold particles) comprised of an electrically conductive material having one or more copies of a first assay-ligand immobilized on its surface and a plurality of ECL moieties immobilized on its surface and (iii) a second assay-ligand immobilized on an electrode wherein said first and second assay-ligands are different in structure and/or specificity (see column 4, last paragraph and column 12, second paragraph) and the ECL moieties include transition metal complexes (see column 9, first paragraph), and claim 18 does not require that a first binding ligand has an ability to interact with a second binding ligand, Sigal *et al.,* disclose an electrode comprising a first binding ligand (ie., said second assay-ligand) and a plurality of colloids each comprising: i) a second binding ligand (ie., said first assay-ligand); and ii) an electron transfer moiety such as a transition metal complex as recited in a) and b) of claim 18 and claim 24. Since Sigal *et al.,* teach that a first assay-ligand and a second assay-ligand are nucleic acids (see column 3, fourth paragraph), Sigal *et al.,* disclose that said first binding ligand is a first nucleic acid and said second binding ligand is a second nucleic acid as recited in claim 27.

Regarding claim 20, Sigal *et al.,* teach that said plurality of colloids comprise a self-assembled monolayer as recited in claim 20 (see column 8, second paragraph).

Sigal *et al.,* do not disclose a substrate comprising an array of electrodes and a detector capable of detecting the voltage associated with electron transfer from said electron transfer moiety as recited in a) and c) of claim 18. However, Sigal *et al.,* teach electrochemical cells

having electrodes for ECL measurement by detecting light emitted from the working electrode surface (see column 9, first paragraph and column 17, left column), Sigal *et al.,* disclose a detector capable of detecting said electron transfer moiety (ie., ECL) as recited in c) of claim 18.

Meade *et al.,* teach that a detector capable of detecting the voltage associated with electron transfer from said electron transfer moiety (see column 27, left column).

Roberts *et al.,* teach advantages of fabricating small electrodes in interdigitated arrays (see column 7, last paragraph bridging to column 8, second paragraph).

Therefore, it would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to have made a composition recited in claim 18 comprising a substrate comprising an array of electrodes (ie., a plurality of identical electrodes, each has a second assay-ligand) and a detector capable of detecting the voltage associated with electron transfer from said electron transfer moiety in view of the patents of Sigal *et al.,* Meade *et al.,* and Roberts *et al.*. One having ordinary skill in the art would have been motivated to do so because Roberts *et al.,* suggest that advantages of fabricating small electrodes in interdigitated arrays "[M]icroelectrodes fabricated in an interdigitated array have inherent advantages in signal detection over more conventional electrode configurations... Scaling down the size of an individual electrode has the advantage of increasing the rate of mass transport, increasing the signal-to-noise (faradaic/charging current) ratio, and decreasing ohmic signal losses... Advantages of fabricating small electrodes in interdigitated arrays go even further by allowing redox cycling of ions back and forth between anode(s) and cathode(s)... This generates much larger currents for detection and allows for the use of extremely small sample volumes" (see column 8) and the simple replacement of one kind of detector (ie., a detector taught by Sigal *et*

al.,) from another kind of detector (ie., a detector capable of detecting the voltage associated with electron transfer from said electron transfer moiety taught by Meade *et al.,*) during the process of making a composition recited in claim 18 would have been, in the absence of convincing evidence to the contrary, *prima facie* obvious to one having ordinary skill in the art at the time the invention was made because the methods capable of detecting an electron transfer moiety are exchangeable (see Meade *et al.,* column 25, fifth paragraph).

Furthermore, the motivation to make the substitution cited above arises from the expectation that the prior art elements will perform their expected functions to achieve their expected results when combined for their common known purpose. Support for making the obviousness rejection comes from the M.P.E.P. at 2144.06, 2144.07, and 2144.09.

Also note that there is no invention involved in combining old elements is such a manner that these elements perform in combination the same function as set forth in the prior art without giving unobvious or unexpected results. *In re Rose* 220 F.2d. 459, 105 USPQ 237 (CCPA 1955).

4. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sigal *et al.,* in view of Meade *et al.,* and Roberts *et al.,* as applied to claims 18, 20, 24, and 27 above, and further in view of Bamdad *et al.,* (US Patent No. 5,620,850, published on April 15, 1997).

The teachings of Sigal *et al.,* Meade *et al.,* and Roberts *et al.,* have been summarized previously, *supra.*

Sigal *et al.,* Meade *et al.,* and Roberts *et al.,* do not disclose that said self-assembling

monolayer comprises an alkyl chain as recited in claim 21. However, Sigal *et al.,* teach that a self-assembling monolayer is made by functionalized thiol or silane (see column 8, second paragraph).

Bamdad *et al.,* teach that a self-assembling monolayer is made by alkyl thiol functional groups (see columns 9 and 10).

Therefore, it would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to have made a composition as recited in claim 21 wherein said self-assembling monolayer comprises an alkyl chain in view of the patents of Sigal *et al.,* Meade *et al.,* Roberts *et al.,* and Bamdad *et al.*. One having ordinary skill in the art would have been motivated to do so because Sigal *et al.,* suggest that functionalized thiol is used to make a self-assembling monolayer (see column 8, second paragraph) and Bamdad *et al.,* have successfully made a self-assembling monolayer using one kind of functionalized thiol, alkyl thiol functional groups (see columns 9 and 10). One having ordinary skill in the art at the time the invention was made would have a reasonable expectation of success to make a self-assembling monolayer using one kind of functionalized thiol, alkyl thiol functional groups.

5. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sigal *et al.,* in view of Meade *et al.,* and Roberts *et al.,* as applied to claims 18, 20, 24, and 27 above, and further in view of Gerpheide *et al.,* (US Patent No. 5,565,658, published on October 15, 1996).

The teachings of Sigal *et al.,* Meade *et al.,* and Roberts *et al.,* have been summarized previously, *supra.*

Sigal *et al.*, Meade *et al.*, and Roberts *et al.*, do not disclose that said substrate is a printed circuit board as recited in claim 22.

Gerpheide *et al.*, teach that the substrate of an electrode array is a printed circuit board (see Figure 3b).

Therefore, it would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to have made a composition as recited in claim 22 wherein said substrate is a printed circuit board in view of the patents of Sigal *et al.*, Meade *et al.*, Roberts *et al.*, and Gerpheide *et al.*. One having ordinary skill in the art would have been motivated to do so because Gerpheide *et al.*, have successfully used a printed circuit board as a substrate to make an array of electrodes and fabrication of electrodes on a printed circuit board would provide an economical and widely available way to make an array of electrodes (see Gerpheide *et al.*, column 5, lines 39-48). One having ordinary skill in the art at the time the invention was made would have a reasonable expectation of success to use a printed circuit board as a substrate to make an array of electrodes.

6. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sigal *et al.*, in view of Meade *et al.*, and Roberts *et al.*, as applied to claims 18, 20, 24, and 27 above, and further in view of Kayyem *et al.*, (US Patent No. 6,096,273, filed on November 5, 1996).

The teachings of Sigal *et al.*, Meade *et al.*, and Roberts *et al.*, have been summarized previously, *supra.*

Sigal *et al.*, Meade *et al.*, and Roberts *et al.*, do not disclose that said electrodes are gold as recited in claim 23.

Kayyem *et al.,* teach to covalently attach nucleic acids (ie., binding ligands as recited in claim 18) to an electrode such as a gold electrode (see column 4 and Figure 4). The different materials such as gold, silicon, carbon and metal oxide are used to make electrodes and these electrodes are exchangeable (see column 20, lines 40-65).

Therefore, it would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to have made a composition as recited in claim 23 wherein said electrodes are gold in view of the patents of Sigal *et al.,* Meade *et al.,* Roberts *et al.,* and Kayyem *et al.*. One having ordinary skill in the art would have been motivated to do so because the simple replacement of one kind of electrode (ie., electrodes taught by Sigal *et al.,*) from another kind of electrode (ie., gold electrodes taught by Kayyem *et al.,*) during the process of making a composition recited in claim 23 would have been, in the absence of convincing evidence to the contrary, *prima facie* obvious to one having ordinary skill in the art at the time the invention was made since Kayyem *et al.,* suggest that electrodes are exchangeable (see column 20, lines 40-65),

Furthermore, the motivation to make the substitution cited above arises from the expectation that the prior art elements will perform their expected functions to achieve their expected results when combined for their common known purpose. Support for making the obviousness rejection comes from the M.P.E.P. at 2144.06, 2144.07, and 2144.09.

Also note that there is no invention involved in combining old elements is such a manner that these elements perform in combination the same function as set forth in the prior art without giving unobvious or unexpected results. *In re Rose* 220 F.2d. 459, 105 USPQ 237 (CCPA 1955).

7. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sigal *et al.*, in view of Meade *et al.*, and Roberts *et al.*, as applied to claims 18, 20, 24, and 27 above, and further in view of Kayyem *et al.*, (November 5, 1996).

The teachings of Sigal *et al.*, Meade *et al.*, and Roberts *et al.*, have been summarized previously, *supra.*

Sigal *et al.*, Meade *et al.*, and Roberts *et al.*, do not disclose that said transition metal complex is ferrocene as recited in claim 25.

Kayyem *et al.*, teach that electron transfer moieties are different transition metal complexes such as ferrocene. These different transition metal complexes are exchangeable (see column 29, lines 31-42).

Therefore, it would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to have made a composition recited in claim 25 wherein said transition metal complex is ferrocene in view of the patents of Sigal *et al.*, Meade *et al.*, Roberts *et al.*, and Kayyem *et al.*. One having ordinary skill in the art would have been motivated to do so because Kayyem *et al.*, have successfully used ferrocene as an electron transfer moiety and the simple replacement of one kind of transition metal complex (ie., a transition metal complex taught by Sigal *et al.*,) from another kind of transition metal complex (ie., a transition metal complex such as ferrocene taught by Kayyem *et al.*,) as an electrode transfer moiety during the process of making a composition recited in claim 25 would have been, in the absence of convincing evidence to the contrary, *prima facie* obvious to one having ordinary skill in the art at the time the invention was made since Kayyem *et al.*, suggest that electron transfer moieties for attaching to a nucleic acid are exchangeable (see column 29, lines 31-42),

Furthermore, the motivation to make the substitution cited above arises from the expectation that the prior art elements will perform their expected functions to achieve their expected results when combined for their common known purpose. Support for making the obviousness rejection comes from the M.P.E.P. at 2144.06, 2144.07, and 2144.09.

Also note that there is no invention involved in combining old elements is such a manner that these elements perform in combination the same function as set forth in the prior art without giving unobvious or unexpected results. *In re Rose* 220 F.2d. 459, 105 USPQ 237 (CCPA 1955).

Response to Arguments

I. In page 6, last paragraph bridging to page 7, last paragraph of applicant's remarks, applicant argues that: "[A]s presented above, neither *Sigal* nor *Meade* disclose 'an array of working electrodes.' This defect is not cured by Roberts. The instant application discloses that by electrode 'is meant a composition, which, when connected to an electronic device, is able to sense a current or charge and convert it to a signal. Alternatively an electrode can be defined as a composition which can apply a potential to and/or pass electrons to or from species in the solution. 'See page 11, lines 10 - 13. In contrast, *Roberts* discloses a first conductor with fingers that interdigitate with fingers of a second conductor. See col. 16, lines 17-19. *Roberts* then refers to such fingers as 'electrodes' and uses the terms such as 'interdigitated electrode arrays'. See col. 7, line 66 and col. 1 6, line 14-17. However, because the fingers are connected together to form part of the conductor, a person skilled in the art will understand that such fingers are not individual electrodes; the conductors as a whole, including the fingers, are electrodes. As the Examiner will appreciate, each electrochemical cell requires a working (indicator) electrode and at least a second counter electrode to complete the circuit. (Note that in the present invention,

there is an array of working electrodes and usually only a single counter electrode. See page 77, lines 10-19. The two 'conductors' of *Roberts* are a working electrode and a counter electrode. In fact, *Roberts* describes a 'four-electrode' system as comprising 'the interdigitated array, a reference electrode, and an auxiliary electrode' thus indicating that the interdigitated array is the working and counter electrode. See col. 23, lines 30-33. For this reason, *Roberts* does not actually disclose an array of working electrodes. It only discloses a set of interdigitated fingers that make up a single working electrode and a counter electrode. See col. 16, lines 14-20 and FIG. 2. Therefore, Roberts only discloses a set of electrodes with interdigitated fingers but not 'an array of working electrodes' as claim 18 recites".

These arguments have been fully considered but they are not persuasive toward the withdrawal of the rejection. First, although Roberts *et al.,* does not disclose an array of working electrodes as recited in claim 18, Roberts *et al.,* suggest that advantages of fabricating small electrodes in interdigitated arrays "[M]icroelectrodes fabricated in an interdigitated array have inherent advantages in signal detection over more conventional electrode configurations... Scaling down the size of an individual electrode has the advantage of increasing the rate of mass transport, increasing the signal-to-noise (faradaic/charging current) ratio, and decreasing ohmic signal losses... Advantages of fabricating small electrodes in interdigitated arrays go even further by allowing redox cycling of ions back and forth between anode(s) and cathode(s)... This generates much larger currents for detection and allows for the use of extremely small sample volumes" (see column 8). Second, since Sigal *et al.,* teach working electrodes as recited in claim 18 and Meade *et al.,* teach that a detector capable of detecting the voltage associated with electron transfer from said electron transfer moiety (see column 27, left column), it would have

been obvious to one having ordinary skill in the art at the time the invention was made to have made a composition recited in claim 18 in view of the patents of Sigal *et al.*, Meade *et al.*, and Roberts *et al.*. Note that the rejection on 18, 20, 24, and 27 is based on the combination of the patents from Sigal *et al.*, Meade *et al.*, and Roberts *et al.*, and is not dependent on the interdigitated array of Roberts *et al.*, as argued by applicant.

II. In page 8, first paragraph bridging to page 10, second paragraph of applicant's remarks, applicant argues that "**[T]here is no motivation to combine Roberts with any of the other references because the suggested combination will render the device disclosed in Roberts unsatisfactory for its intended purpose**" and "**[I]t is improper to combine *Roberts* with other references because Roberts teaches away from the instant invention**" because "[A]pplicants submit that any modification to *Roberts*-type electrodes by adding binding ligands will render it unsatisfactory for its intended purpose. A person skilled in the art would understand that covering the conductors with biological substance, such as binding ligands, will shield the conductors from the solution surrounding it. As such, the current between the conductors will be impeded and the redox cycling of ions back and forth between anode(s) and cathode(s), as *Roberts* discloses, will be hindered. It would also impede the ionic diffusion disclosed by Roberts" and "the conductors, if covered by either binding ligand or SAM, or both, as the Examiner suggests, it would likely impede the reaction, and would hinder redox cycling of ions back and forth between anode(s) and cathode(s) because the binding ligands and SAM serve as barrier to block the current. Thus, the conductors would not work properly and be unsatisfactoly for Roberts' intended purpose" and "*Roberts* teaches that 'binding material' is not to be attached to the electrode"

These arguments have been fully considered but they are not persuasive toward the withdrawal of the rejection. First, the rejection on 18, 20, 24, and 27 is based on the combination of the patents of Sigal *et al.*, Meade *et al.*, and Roberts *et al.*, (see above rejection) and is not dependent on the interdigitated array of Roberts *et al.*, as argued by applicant. Second, Roberts *et al.*, suggest that advantages of fabricating small electrodes in interdigitated arrays "[M]icroelectrodes fabricated in an interdigitated array have inherent advantages in signal detection over more conventional electrode configurations... Scaling down the size of an individual electrode has the advantage of increasing the rate of mass transport, increasing the signal-to-noise (faradaic/charging current) ratio, and decreasing ohmic signal losses... Advantages of fabricating small electrodes in interdigitated arrays go even further by allowing redox cycling of ions back and forth between anode(s) and cathode(s)... This generates much larger currents for detection and allows for the use of extremely small sample volumes" (see column 8). Third, the examiner provides motivation in the rejection (see above rejection).

III. In page 10, third paragraph bridging to page 11, first paragraph of applicant's remarks, applicant argues that "**[T]he teachings of the references are not sufficient to render the claims *prima facie* obvious because the proposed combination with or modification of *Sigal* would change the principle of operation of *Sigal***" because "[*S]igal* is directed to compositions and methods for the detection of labels that emit an electrochemiluminescent signal upon a triggering by voltage imposed on a working electrode. As such, the principle of operation of *Sigal* is based on optical detection of light and not on the measurement of a change in voltage. Thus, replacing the optical detector in *Sigal* with the voltage detector of *Meade* is not a 'simple

replacement'- because it totally changes the operation principle of *Sigal*. Therefore, teachings of the references are not sufficient to render the pending claims *prima facie* obvious".

These arguments have been fully considered but they are not persuasive toward the withdrawal of the rejection because replacing the optical detector in Sigal *et al.,* with the voltage detector of Meade *et al.,* is obvious since Meade *et al.,* teach both optical detection method and voltage detection method and suggest that the methods capable of detecting an electron transfer moiety are exchangeable (see Meade *et al.,* column 25, fifth paragraph).

IV. In page 11, second and third paragraph of applicant's remarks, applicant argues that "**[T]here is no reasonable expectation to success because modification of *Roberts* will render it inoperable**" because "[A]s presented above, covering the conductors disclosed in Roberts with binding ligands and SAMs should impede the current between the electrode and hinder redox cycling of ions back and forth between anode(s) and cathode(s) because the binding ligands and SAM serves as physical barriers, which block the current".

These arguments have been fully considered but they are not persuasive toward the withdrawal of the rejection because the rejection on 18, 20, 24, and 27 is based on the combination of the patents of Sigal *et al.,* Meade *et al.,* and Roberts *et al.,* (see above rejection) and is not dependent on the interdigitated array of Roberts *et al.,* as argued by applicant.

V. In page 11, last paragraph of applicant's remarks, applicant argues that "[F]or the forging reasons, the Examiner failed to establish a *prima facie* case of obviousness. Therefore, claim 18, and claims 20-25, and 27, which depend thereon are not obvious in view of *Sigal* and *Meade* over *Roberts*; Claim 21 is not obvious over *Sigal*, in view of *Meade*, and *Roberts*, and further in view of *Bamdad*; Claim 22 is not obvious over *Sigal* in view of *Meade*, and *Robert.*, and further

in view of *Gerpheide*; and Claims 23 and 25 are not obvious over *Sigal* in view of *Meade* and *Roberts*, and further in view of *Kayyem*. Applicants respectfully request the rejections to be withdrawn.

These arguments have been fully considered but they are not persuasive toward the withdrawal of the rejection. First, the rejection on claims 18, 20, 24, and 27 under 35 U.S.C 103 is proper (see above Response to Arguments I to IV). Second, applicant does not argue the references related to Bamdad *et al.*, *Gerpheide et al.*, and Kayyem *et al.*.

Conclusion

8. No claim is allowed.

9. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CAR § 1.6(d)). The CM Fax Center number is (571)273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Lu, Ph.D., whose telephone number is (571)272-0746. The examiner can normally be reached on Monday-Friday from 9 A.M. to 5 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla, can be reached on (571)272-0735.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

June 26, 2006

FRANK LU
PRIMARY EXAMINER